

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
ENGINEERING AND COMPLIANCE
Coating, Printing and Aerospace Operations Team
PERMIT APPLICATION EVALUATION

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App. number(s) **500137, 500139**
Processed by Rene Loof
Reviewed by Hamed Mandilawi
Date **09/13/09**

PERMIT TO OPERATE EVALUATION
Spray Booth (modification)

Applicant's Name: Rohr, Inc.
Company ID No.: 800113
Mailing Address: 8200 Arlington Ave., Riverside, CA 92503
Equipment Address: 8200 Arlington Ave., Riverside, CA 92503

EQUIPMENT DESCRIPTION:

Application 500137:
Title V/RECLAIM Revision

Equipment	ID No.	Connected To	Source Type/ Monitoring Unit	Emissions	Conditions
Process 4: SURFACE COATING					
System 1: PRODUCTION SPRAY BOOTHS					
SPRAY COATING OPERATION, G-34, 14 FT-5 IN W., X 19FT-4 IN L., X 9 FT H., WITH 2 STAGE DRY FILTERS, 168" X 102" BLANKET (1 ST. STAGE) AND TWENTY EIGHT 24" X 24" X 2" (2 ND. STAGE). A/N 475330 <u>500139</u>	D202			PM: (9) [RULE 404, 2-7-1986]; VOC: (10)[40CFR 63 Subpart GG]; VOC: (9) [RULE 1124, 9-21-2001]; VOC: (9) [RULE 1171,11-7-2003; <i>RULE 1171, 2-1-2008</i>]	A63.7, <u>B59.9</u> , C1.18, C1.19. C6.1, D322.1, H23.12, K67.1, K67.2, K67.6

HISTORY:

The company submitted Application No 500139 on 6/30/09 for a change of permit conditions to the existing spray booth under Device 202(P/OF97552, a/n 475330) to add the use of additional toxic air contaminants under condition B59.9. Application no. 500137 was submitted at the same time for the RECLAIM/Title V Permit Revision application for this change.

The company is a Title V source and is a Cycle 2 RECLAIM facility for NOx emissions. The company is located in an industrial zone with nearby residential areas located to the north and south of the property. A review of District compliance records indicates that there are no Public Complaints filed or Notices of Violations issued in the last two years. However, the facility was issued a Notice to Comply (D14113) on 9/19/08 requiring the facility to submit the semi annual monitoring reports and the APEP report by the due dates. The applicant provided the requested information and is currently operating in compliance with applicable permit conditions and rules and regulations.

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PROCESS DESCRIPTION:

Rohr, Inc. is a subsidiary of the Goodrich Corporation, and is a large producer of military and commercial aerospace products. Rohr Inc., performs metal and composite materials processing, structural bonding and assemble operations at its facility located in Riverside, California. Manufacturing processes conducted at this location include composite bonding, resin curing, core stabilizing, primer and topcoat spray coating, roller coating, degreasing, solvent cleaning, metal surface preparation, abrasive blasting, tool preparation, and tool storage. All manufacturing processes conducted at this facility are operated under stringent Federal Aviation Administration (FAA) regulations and commercial aircraft and military specifications.

This proposed change of condition involves replacing current maskent adhesive which contains trace amounts of formaldehyde and acetaldehyde with the two substitute maskant adhesives. The current adhesive is no longer being manufactured or sold. In addition to formaldehyde and acetaldehyde, the two new maskent adhesives contain trace amounts of vinyl acetate, dioxane, acrylamide, and toluene. The total daily usage for both adhesives combined will remain unchanged from the 3.0 gallons per day estimated daily usage for the current adhesive. This spray booth is equipped with two stage exhaust filtration with an efficiency of 90%. The operation of this spray booth will continue to remain under the process VOC limit of 1179 lb VOC/day. No more than 3 gallons per day of this adhesive are expected to be used in the booth. D202 currently has a Rule 1132 equipment limit of 10 lb VOC/day.

The operating hours of the facility are 24 hrs/day, 7 day/week, 52 wks/yr. The spray booth operates 8 hrs/day, 7 day/wk, 52 wks/yr.

EMISSION CALCULATIONS:

Spray Booth

65% transfer efficiency

90% control efficiency

PM = 2 x PM₁₀

ROG = TOG

The current Potential to Emit for this spray booth will remain at its current level of 10 lb VOC/day. The company only expects to apply 3 gallons per day in this booth, which will result in significantly less VOC emissions than the limit since the VOC content of the adhesive is 0.011 lb VOC/gal. Due to the low VOC content of the adhesive, a separate usage limit will be needed to limit toxic emissions since the maximum usage under the VOC limit would cause the equipment to exceed the 1401 health risk limits. Therefore a limit of 3 gallons of adhesive per day will be added. The PM emissions calculated below are based on the Rule 1124 VOC limit and an assumed average of 3 lb PM/gal.

$$R1, ROG_{hr} = 10.0 \frac{\text{lb ROG}}{\text{day}} \div 24 \frac{\text{hr}}{\text{day}} = 0.42 \frac{\text{lb ROG}}{\text{hr}}$$

$$R1 = R2$$

$$PM_{max} = 10 \frac{\text{lb ROG}}{\text{day}} \div 2.1 \frac{\text{lb VOC}}{\text{gal}} \cdot 3 \frac{\text{PM}}{\text{gal}} = 14.3 \frac{\text{lb PM}}{\text{day}}$$

$$R1_{PM, hr} = 14.3 \frac{\text{lb PM}}{\text{day}} \cdot (1 - 0.65) \div 24 = 0.21 \frac{\text{lb PM}}{\text{hr}}$$

$$R2_{PM, hr} = 0.21 \cdot (1 - 0.90) = 0.02 \frac{\text{lb PM}}{\text{hr}} \quad (PM = 2 PM_{10})$$

$$30\text{-Day Avg, } PM_{10} = 0.02 \frac{\text{lb PM}}{\text{hr}} \cdot 0.5 \frac{\text{lb PM}_{10}}{\text{lb PM}} \cdot 7 \frac{\text{day}}{\text{week}} \cdot 4.33 \frac{\text{wk}}{\text{mo}} \cdot \frac{1 \text{ month}}{30 \text{ days}} = 0.01 \frac{\text{lb PM}_{10}}{\text{day}}$$

RULES/REGULATION
EVALUATION:

RULE 212, PUBLIC NOTIFICATION

SUBPARAGRAPH 212(c)(1):

This paragraph requires a public notice for all new or modified permit units that may emit air contaminants located within 1,000 feet from the outer boundary of a school. According to the MSN Yellow Pages and Google Maps, the facility will not be within 1000 feet of any schools. Therefore, public notice distribution will not be required under this section.

PARAGRAPH 212(c)(2):

The changes in condition will not result in emission increases exceeding the daily maximums for NOx, CO, SOx, VOC or PM10 emissions as specified in Rule 212(g). The spray booth will stay at the same emission level. Therefore, no equipment will have an increase in emissions and a 30-day public notice period will not be required under this paragraph.

PARAGRAPH 212(c)(3):

A public notice will not be required under this paragraph. See Rule 1401 evaluation section.

PARAGRAPH 212(g):

The changes in condition will not result in emission increases exceeding the daily maximums for NOx, CO, SOx, VOC or PM10 emissions as specified in Rule 212(g). The spray booth will stay at the same emission level at the facility. Therefore, a 30-day public notice period will not be required under this paragraph.

RULE 401, VISIBLE EMISSIONS

With the proper use of the equipment, no visible emissions are expected.

RULE 402, NUISANCE

With the proper operation of the equipment, no nuisance problems are expected at this facility. The facility is located within an industrial area with nearby residential areas to the north and south of the facility. The operations in the spray booth will be the same as previously permitted. Based on previous experience with this operation, the emissions from the equipment should not result in a nuisance. Compliance with this rule is expected.

RULE 1124, AEROSPACE ASSEMBLY AND COMPONENT MANUFACTURING OPERATIONS

In the spray booth, the company will be spraying a maskant adhesive onto aerospace parts and products. The current limit in this rule for a non-structural adhesive is 250 g VOC/L. The Flexbond 153 used in this booth will have a VOC content of 1.38 g VOC/L. VINNAPAS 600BP has a 7.43 gm/lit VOC content and the 3M Fastbond has a 1.8 gm/lit VOC content. The material will be applied with a HVLP spray gun which will meet the transfer efficiency requirements of subsection (c)(3) of this rule. For solvent cleaning purposes, the facility will be using acetone for items processed in the spray booth. Acetone is defined as an exempt compound under Rule 102. Coating and adhesive application equipment is subject to Rule 1171. The company will meet the cleaning and coating requirements for this rule. Compliance with this rule is expected.

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RULE 1132, FURTHER CONTROL OF VOC EMISSIONS FROM HIGH EMITTING SPRAY BOOTH FACILITIES

The facility has a VOC PTE greater than 20 tons per year and is subject to the requirements of this rule. This spray booth will meet the exemption from section (c) of this rule by meeting the requirements of 1132(h)(2). The allowable VOC emission for this booth is 10 lbs of VOC per day. Therefore this spray booth qualifies under the lowest tier in the table in this subsection and will meet the exemption requirements. The flow rate of the spray booth is 14000 cfm, which actually allows a higher VOC limit (25 lb/day). Since the emission rate is in the lowest tier, no flow rate permit conditions will be required for this rule. Continued compliance with this rule is expected.

RULE 1171, SOLVENT CLEANING OPERATIONS

The company will be using acetone for spray gun cleaning. Acetone is defined as an exempt compound under Rule 102. Compliance with this rule is expected.

REGULATION XIII

RULE 1303(a), BEST AVAILABLE CONTROL TECHNOLOGY (BACT)

The change in conditions will not result in an increase in emissions of criteria pollutants for the spray booth. Therefore no BACT requirements will be triggered.

RULE 1303(b)(1), MODELING

The change in conditions will not result in an increased emission of any criteria pollutant for the spray booth. Therefore no modeling requirements will be triggered.

RULE 1304(c)(1), OFFSET EXEMPTIONS

The change in conditions will not result in the increased emission of any criteria pollutant for the facility. Therefore no offsets will be required for this project.

RULE 1401, NEW SOURCE REVIEW OF TOXIC AIR CONTAMINANTS

According to the Material Safety Data Sheets (MSDS) that were submitted with this application, Rohr, Inc. will be spraying adhesive in the spray booth that contains toxic air contaminants (TAC) identified in Table 1 of Rule 1401, with an effective date of June 5, 2009 or earlier. The new adhesives in the spray booth will contain Vinyl Acetate, formaldehyde, 1,4 dioxane, Acrylamide, Toluene, and Acetaldehyde, identified as toxic compounds. The 10 lb VOC/day limit will allow an excessive amount of the adhesive to be applied because of the low VOC content. This will result in toxic emissions that will exceed the health risk limits of this rule. Therefore, the current emission of limit of 0.4 lb acetaldehyde per month and 0.64 lb formaldehyde per month (based on 3 gal adhesive /day) will be accompanied by an adhesive limit of 3.0 gallons per day which is imposed in accordance with the company's maximum expected usage. Under these limits, the spray booth passes a Tier I health risk assessment.

Current permit condition B59.9 will be modified by disallowing the use of materials that contain toxic air contaminants as identified in Rule 1401, as amended on June 5, 2009, or earlier, except for Vinyl Acetate, Formaldehyde, 1,4 dioxane, Acrylamide, Toluene and Acetaldehyde. Compliance with this rule is expected

REGULATION XX-RECLAIM

RULE 2005-NEW SOURCE REVIEW FOR RECLAIM

Rohr, Inc. is a NOx RECLAIM facility. This project will not affect NOx emissions at the facility since the spray booth does not emit NOx and the change of condition will not affect the NOx emissions. This rule is not applicable to this project.

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40 CFR 63 SUBPART GG- National Emission Standards for Aerospace Manufacturing

The facility is a major source pursuant to §63.2, and will be subject to the requirements of this subpart. To comply with §63.744 the company will be using acetone for hand wipe operations and enclosed cleaning systems to clean application equipment. The cleaner will be an exempt solvent that is non-photochemically reactive and is not a HAP. The facility will be applying adhesives in this spray booth. Pursuant to 63.741(f), there are no control requirements for adhesive applications. The facility is expected to comply with this section.

REGULATION XXX: TITLE V

This facility is in the RECLAIM program. The proposed project is considered as a “de minimis significant permit revision” for non-RECLAIM pollutants or hazardous air pollutants (HAPs), and a “minor permit revision” for RECLAIM pollutants to the RECLAIM/Title V permit for this facility.

Non-RECLAIM Pollutants or HAPs

Rule 3000(b)(6) defines a “de minimis significant permit revision” as any Title V permit revision where the cumulative emission increases of non-RECLAIM pollutants or HAPs from these permit revisions during the term of the permit are not greater than any of the following emission threshold levels:

Air Contaminant	Daily Maximum (lbs/day)
HAP	30
VOC	30
NO _x *	40
PM ₁₀	30
SO _x *	60
CO	220

* Not applicable if this is a RECLAIM pollutant

To determine if a project is considered as a “de minimis significant permit revision” for non-RECLAIM pollutants or HAPs, emission increases for non-RECLAIM pollutants or HAPs resulting from all permit revisions that are made after the issuance of the Title V renewal permit shall be accumulated and compared to the above threshold levels. This proposed project is the 8th permit revision to the Title V renewal permit issued to this facility on May 9, 2005. The following table summarizes the cumulative emission increases resulting from all permit revisions since the Title V renewal permit was issued:

Revision	HAP	VOC	NO _x *	PM ₁₀	SO _x	CO
Previous permit Revisions.	0	4	12*	0	0	9
8 th Permit Revision: Spray Booth D202 Change of Condition adding additional toxic contaminants.	0	0	0	0	0	0
Cumulative Total	0	4	12*	0	0	9
Maximum Daily	30	30	40*	30	60	220

* RECLAIM pollutant, not subject to emission accumulation requirements

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+ Reduced emissions will not be subtracted from Cumulative Total

Since the cumulative emission increases resulting from all permit revisions are not greater than any of the emission threshold levels, this proposed project is considered as a “de minimis significant permit revision” for non-RECLAIM pollutants or HAPs.

RECLAIM Pollutants

Rule 3000(b)(12)(A)(v) defines a “minor permit revision” as any Title V permit revision that does not result in an emission increase of RECLAIM pollutants over the facility starting Allocation plus nontradeable Allocations, or higher Allocation amount which has previously undergone a significant permit revision process.

Since NO_x is a RECLAIM pollutant for this facility, a separate analysis shall be made to determine if the proposed permit revision is considered a “minor permit revision” for RECLAIM pollutants. However, the change of permit condition will not result in an increase in NO_x emissions. As a result, this proposed project is considered as a “minor permit revision” for RECLAIM pollutants.

RECOMMENDATION

The proposed project is expected to comply with all applicable District Rules and Regulations. Since the proposed project is considered as a “de minimis significant permit revision” for non-RECLAIM pollutants or hazardous air pollutants (HAPs), and a “minor permit revision” for RECLAIM pollutants, it is exempt from the public participation requirements under Rule 3006(b). A proposed permit incorporating this permit revision will be submitted to EPA for a 45-day review pursuant to Rule 3003(j). If EPA does not have any objections within the review period, a revised Title V/RECLAIM permit will be issued to this facility.

PERMIT CONDITIONS

The equipment will be subject to the following permit conditions

Spray Booth D202

A63.7

THE OPERATOR SHALL LIMIT EMISSIONS FROM THIS EQUIPMENT AS FOLLOWS:

CONTAMINANT	EMISSIONS LIMIT	
VOC	LESS THAN OR EQUAL TO 10 LBS IN ANY ONE DAY	

B59.9

THE OPERATOR SHALL NOT USE THE FOLLOWING MATERIAL(S) IN THIS DEVICE :

A. Materials containing toxic air contaminants identified in Table I of Rule 1401, with an effective date of June 5, 2009, or earlier, except for Vinyl Acetate(CAS# 108-05-4), Formaldehyde (CAS# 50-00-0), 1,4 Dioxane(CAS# 123-91-1), Acrylamide(CAS# 79-06-1), Toluene(CAS# 108-88-3) and Acetaldehyde (CAS# 75-07-0).

B. Materials containing formaldehyde in concentrations greater than 0.05% by wt., or acetaldehyde in concentrations greater than 0.08% by wt.

C. Maskant adhesives in excess of 3.0 gallons per day.

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C1.18

THE OPERATOR SHALL LIMIT THE MATERIAL PROCESSED TO NO MORE THAN 0.40 LB(S) IN ANY ONE CALENDAR MONTH.

For the purpose of this condition, material processed shall be defined as acetaldehyde emissions.

The operator shall maintain records in a manner approved by the District, to demonstrate compliance with this condition.

C1.19

THE OPERATOR SHALL LIMIT THE MATERIAL PROCESSED TO NO MORE THAN 0.64 LB(S) IN ANY ONE CALENDAR MONTH.

For the purpose of this condition, material processed shall be defined as formaldehyde emissions.

The operator shall maintain records in a manner approved by the District, to demonstrate compliance with this condition.

C6.1

THE OPERATOR SHALL USE THIS EQUIPMENT IN SUCH A MANNER THAT THE DIFFERENTIAL PRESSURE BEING MONITORED, AS INDICATED BELOW, DOES NOT EXCEED 0.5 INCHES WATER COLUMN.

To comply with this condition, the operator shall install and maintain a(n) differential pressure gauge to accurately indicate the differential pressure across the two stage filter media.

D322.1

THE OPERATOR SHALL PERFORM A WEEKLY INSPECTION OF THE EQUIPMENT AND FILTER MEDIA FOR LEAKS, BROKEN OR TORN FILTER MEDIA, AND IMPROPERLY INSTALLED FILTER MEDIA.

H23.12

THIS EQUIPMENT IS SUBJECT TO THE APPLICABLE REQUIREMENTS OF THE FOLLOWING RULES OR REGULATIONS:

CONTAMINANT	RULE	RULE/SUBPART
VOC	DISTRICT RULE	109
VOC	DISTRICT RULE	1124
VOC	DISTRICT RULE	1171
PM	DISTRICT RULE	481
HAPS	40CFR63, SUBPART	GG

K67.1

THE OPERATOR SHALL KEEP RECORDS, IN A MANNER APPROVED BY THE DISTRICT, FOR THE FOLLOWING PARAMETER(S) OR ITEM(S):

the name of the person performing the inspection and/or maintenance of the filter media

the date, time and results of the inspection

the date, time and description of any maintenance or repairs resulting from the inspection

K67.2

THE OPERATOR SHALL KEEP RECORDS, IN A MANNER APPROVED BY THE DISTRICT, FOR THE FOLLOWING PARAMETER(S) OR ITEM(S):

weekly record of pressure drop across the filter media

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K67.6
THE OPERATOR SHALL KEEP RECORDS, IN A MANNER APPROVED BY THE DISTRICT, FOR THE FOLLOWING
PARAMETER(S) OR ITEM(S):

daily usage and volatile organic compound emissions in a manner approved by the Executive Officer